

THE KNOW-HOW FACTORY



THE KNOW-HOW FACTORY

ZIMMER GROUP **COMMITTED TO OUR CUSTOMERS**

WE HAVE SUCCEEDED FOR YEARS BY OFFERING OUR CUSTOMERS INNOVATIVE AND INDIVIDUALIZED SOLUTIONS. ZIMMER HAS GROWN CONTINUOUSLY AND TODAY WE REACHED A NEW MILESTONE: THE ESTABLISHMENT OF THE KNOW-HOW FACTORY. IS THERE A SECRET TO OUR SUCCESS?

Foundation. Excellent products and services have always been the foundation of our company's growth. Zimmer is a source of advanced solutions and important technical innovations. This is why customers with high expectations for technology frequently find their way to us. When things get tricky, Zimmer Group is in its best form.

Style. We have an interdisciplinary approach to everything we do, resulting in refined process solutions in six areas of technology. This applies not just to development but also to production. Zimmer Group serves all industries and stands ready to resolve even the most unique and highly individualized problems. Worldwide.

Motivation. Customer orientation is perhaps the most important factor of our success. We are a service provider in the complete sense of the word. Even our decision to identify ourselves as Zimmer Group reflects this reality. With Zimmer Group, our customers now have a single, centralized contact for all of their needs. We approach each customer's situation with a high level of competence and a broad range of possible solutions.



PRODUCT EXPANSION **GEP2000 SERIES**

GEP2000 – The second generation

The most successful electric small parts gripper series forms the second generation with a new variant. The IL-03 variant now has free positioning capability, which means that the stroke can be flexibly adapted to the workpiece. This saves time in the process and prevents interfering contours. Also new is the workpiece loss detection function. Together with the new variant, the existing GEP2000 grippers have been revised mechanically and software-wise to offer even more performance. In addition to these innovations, the grippers

also have the proven features such as mechanical self-locking, which ensures that the workpiece is held securely in the event of a power failure, part detection in the range of +/- 0.05 mm, adjustable gripping force, and the possible assignment of 32 workpiece data sets.



GEP2000 Series

	Technical data			
Order No.	GEP2006IL-03-B	GEP2010IL-03-B	GEP2013IL-03-B	GEP2016IL-03-B
Control	② IO -Link	② IO -Link	♦ IO -Link	② IO -Link
Positionable	Yes	Yes	Yes	Yes
Integrated position sensing	Using process data	Using process data	Using process data	Using process data
Gripping force [N]	145	200	360	500
Stroke per gripper jaw [mm]	6	10	13	16
Weight [kg]	0,18	0,31	0,54	0,9



NEW INSTALLATION SIZES GPH8000 SERIES

GPH8000 Series - Two new installation sizes

The two new installation sizes extend the series in the lower and upper part spectrum. They are corrosion-protected in the standard version, equipped with scrapers on the circular guide and optimally sealed according to IP54 standard. The grippers can be equipped with gripping jaws with a total

weight of up to 90 kg and a maximum length of 900 mm. Optionally, the GPH8000 grippers are available with synchronous (-00) or asynchronous (-30) gripper jaw movement and can optionally be equipped with an integrated clamping element to secure the workpiece in case of pressure drop.

Installation size GPH8200

	► Technical data		
Order No.	GPH82060N-00-A	GPH82060CL-00-A	GPH82060CL-30-A
Position retention via clamping element	No	Yes	Yes
Stroke per gripper jaw [mm]	60	60	60
Closing/opening grip force [N]	900/900	900/900	900/900
Weight [kg]	5,7	6,4	6,85
Order No.	GPH82100N-00-A	GPH82100CL-00-A	GPH82100CL-30-A
Position retention via clamping element	No	Yes	Yes
Stroke per gripper jaw [mm]	100	100	100
Closing/opening grip force [N]	900/900	900/900	900/900
Weight [kg]	7,3	8,1	8,3

Installation size GPH8400

	► Technical data		
Order No.	GPH84080N-00-A	GPH84080CL-00-A	GPH84080CL-30-A
Position retention via clamping element	No	Yes	Yes
Stroke per gripper jaw [mm]	80	80	80
Closing/opening grip force [N]	3,300/3,300	3,300/3,300	3,300/3,300
Weight [kg]	33,9	36,5	36
Order No.	GPH84160N-00-A	GPH84160CL-00-A	GPH84160CL-30-A
Position retention via clamping element	No	Yes	Yes
Stroke per gripper jaw [mm]	160	160	160
Closing/opening grip force [N]	3,300/3,300	3,300/3,300	3,300/3,300
Weight [kg]	40,7	43,5	43



THE WARRANTY PROMISE WITHOUT ANY FUSS

5000 Series - The first choice

With its uncompromising quality "Made in Germany", the Zimmer Group promises a 24-month warranty for all GPP and GPD5000 grippers. This applies without any fuss to all parts, including those in contact with the workpiece and wearing parts, and is independent of the number of cycles. The series not only excels in quality and workmanship, it also offers the highest performance and is universally applicable.





The best -Steel linear quide

With the Steel Linear Guide, the gripper has been given a guide that takes the proven principle of the linear guide and combines it with state-of-the-art sealing and coating technology. This gives you the most robust gripper in combination with corrosion protection and IP64 protection class currently available on the market.



The alternative -Aluminum linear quide

They are the alternative because they are technically superior to all T-slot grippers and at least equal to multi-tooth guided grippers. They are "everyday grippers", sufficient for most applications and offer 15 million cycles maintenance-free.

GPP5000 Series						
Price range	•	•	•	•	•	•
Robustness	•	•	•	•	•	•
Maintenance-free	•	•	•	•	•	•
Environmental contamination	•	•	•	•	•	•

GPP5000AL Series					
Price range	•	•	•		
Robustness	•	•	•	•	
Maintenance-free	•	•	•		
Environmental contamination	•	•	•		

Learn more about our premium products and our warranty promise





TWO STRONG PARTNERS -ONE UNIQUE PLATFORM

MATCH

Equipped with an extensive range of functions and universal communication interfaces, MATCH is compatible with all common lightweight robots on the market – an ideal system for cobots and conventional 6-axis robots.



Applications as varied as the system

Whether mobile and collaborative robotics or fully automated applications, just one flexible system gives the user access to a nearly unlimited range of uses from production and assembly to warehouse logistics, shipping and even laboratory automation.

Typical tasks are pick-and-place, order picking, packaging and palletizing, checking and testing. Various mechanical and vacuum grippers can be selected corresponding to the workpiece and handling task. If the requirements change, the system can be quickly and easily adapted.



Standardized connection and communication

Appropriate for all common lightweight robots an ideal system for cobots and conventional 6-axis robots.



Simple installation

Mechanical connection by quick-changer and configuration using a setup assistant.



Flexible

Any robot, any gripper, any end effector. High flexibility thanks to an extensive portfolio.



Full process control

Collect, evaluate and visualize added-value data, including cloud connection.

ANY ROBOT, ANY GRIPPER, **ANY END EFFECTOR**

Compatibility with all common robots

The MATCH portfolio opens up countless application possibilities in all industries. No matter which modular solution you choose, we promise: It's a MATCH. Smooth interaction between robot and gripper is guaranteed by the smart connection concept.

Robot

Appropriate for all common lightweight robots - an ideal system for cobots and conventional 6-axis robots.



Communication module for IO-Link module

No SCM is necessary for quick-change module with digital I/O. With quick-change module RS485, the SCM is integrated.



Quick change module (top)

Digital I/O, IO-Link, RS485







Gripping components incl. quick-change module (bottom)

A constantly expanding portfolio of compatible gripping components.













Vacuum generator / Connection of gripping components (vacuum)

QUICK-CHANGE FUNCTION MANUAL AND AUTOMATED

Fast, convenient exchange

The compact quick-change module provides two quick and easy ways to swap a component. In addition to an automated exchange in a storage station, known as the gripper station, exchanging by hand is also possible within seconds. Thanks to the ergonomic click system – integrated on the end effector being changed – it is possible to carry out a manual change with just one hand. At the same time, this prevents the exchange module from falling.

Standardized interfaces

The quick-change system features various interfaces. Alongside a compatible mechanical interface and a pneumatic connection, electrical connections are also available. This variety of technological options makes it possible to use many different robot types with a wide variety of end effectors

Full process control in every application

MATCH guarantees full support and process control – from commissioning to ongoing operation and process monitoring. Digital services such as HMI functions for setup and operation, collection of process data / condition monitoring, evaluation and visualization and cloud connection offer added value in all phases of the product life cycle.



Learn more about our MATCH quick-change system



EXTENDED PRODUCT RANGE ENERGY ELEMENTS

Electrical energy elements with new functions

The energy elements of the WER series offer various new useful functions for supplying tools at the tool changer with energy and signals. These include, for example, tool coding of up to 16 loose parts, ground discharge for high currents and also elements with various connection plugs for signal

transmission. In addition, we have planned further innovations for the coming months, such as contactless signal transmission, signal transmission with shielding (e.g. for servo motors), and a direct connection for the sensors of several grippers or other tools.

Best protected

The necessary protection against dust and splash water has been provided for: the energy elements are now protected up to IP54 when coupled and can therefore also be used in harsh environments. If one of the fixed parts is not in use, it can be covered with an IP54 protective element.

Transmission for pneumatics and hydraulics

There are also further innovations for pneumatic and hydraulic transmission. The energy elements now have a higher number of connections, have a larger selection of connection threads and can be operated in the low, medium but also high pressure range.





More Information about our energy elements



IMPROVED AXIS COMPENSATION MODULES XYR1000 SERIES

Highest loads thanks to new linear guide

In addition to the use of new linear guides, the most important innovations of the XYR1000-B version are the enormously improved technical properties of the axis compensation module compared to its predecessor. The linear guide is located further to the outside and the overall guide length is much longer, resulting in a much more stable structure. This

enables much higher force and torque absorption, and the new axis compensation module version can also cope with higher shock loads as a result. In addition, by increasing the cylinder diameter, it was possible to significantly increase the holding forces for the two functions of centric and off-center holding by an average of 35%.

Additional installation sizes

A total of three additional sizes have been added to the existing sizes 1063 to 1160. Sizes 1040 and 1050 are intended for small handling weights, while size 1200 is more suitable for heavy-duty applications.





Try our product finder from our robotics section



NEW CRASH PROTECTION CRR SERIES

Protects against collisions from any direction

The new CRR product series is a practical crash protection system that can prevent damage to your tool or workpiece in the event of a collision by allowing a compensating movement in several directions. This deflection results in a signal that can be used in the control to initiate the emergency stop. The new CRR series is distinguished from the current CSR series by an automatic reset. Here, for example, a spring-loaded pneumatic piston resets itself in order to continue with

the process after a collision. The connecting flange for the tools is then moved back to the starting position – regardless of the orientation and position. This allows a system to be restarted from a safe distance without being in the vicinity of moving parts. This is also an advantage if entering the plant is not desired, not safe or only possible with difficulty. In any case, work can be continued quickly.

Powerful and versatile

The technical data represent another highlight. Compared to the benchmark, the CRR series offers a larger compensation stroke or compensation angle with similar installation space, which provides additional safety for your application. The maximum load-bearing forces and torques are also around 30% higher on average than the benchmark, making even

smaller components suitable for high handling weights. Despite its robust and powerful design, the CRR series is also suitable for sensitive applications. By simply changing the air pressure, the release behavior can be adjusted and optimally adapted to the application.



Try our product finder from our robotics section



SUPERIOR TECHNOLOGY IN PERFECTION INDUSTRIAL SHOCK ABSORBER POWERSTOP

Spiral groove technology

The unique spiral groove technology is a defining feature of PowerStop industrial shock absorbers. In contrast with conventional industrial shock absorbers with throttle bores. the constantly tapering spiral groove causes precise, low-vibration damping absorption. The PowerStop industrial shock absorber achieves maximum energy absorption with the smallest installation space through optimal utilization.

New Adjustable Energy series – the adjustable absorbers

The new Adjustable Energy series makes it possible to achieve infinitely adjustable - and thus ideal - energy absorption settings in the damping process. In addition to the normal stroke version, it is also available in a long-stroke version whose adjustability further increases the benefit of extremely smooth damping.

Product finder

There are a few ways to find the right industrial shock absorber for your application. One simple and quick way is the Zimmer Group's online product finder. The convenient tool quickly leads to well-founded selection decisions, combining calculation, selection aid and configurator functions. With the software, the user can perform all the necessary calculations and, based on this data, make a selection from the product range and possibly supplement the selected product with additional accessories.







NEW INSTALLATION SIZES DKHS1000 SERIES

High dynamics and durability - advantages when used in combination with torque drives

Especially when used in combination with highly dynamic torque drives, the DKHS1000 series can show off the advantages of its fast closing time of less than 30 milliseconds. This means that closing times are almost 10 times faster than with pneumatic solutions.

Accuracy and holding torque for different requirements

The holding torques are specified in each case as a function of stiffness at one angular second for use in machining processes and at five angular seconds for design under safety requirements.

Innovative and proven active principles used beneficially

Combined with the large piston area, holding torques of up to 8.000 Nm can be achieved via the preload of the housing material. Based on customer B10d value of over 5 million cycles under application conditions can be confirmed.



	Technical data		
Order No.	DKHS1220-00-A	DKHS1280-00-A	DKHS1320-00-A
Holding torque 5" [Nm]	1,900	3,000	3,900
Holding torque 1" [Nm]	1,500	2,400	2,800
Shaft Ø [mm]	220	280	320
Operating pressure min./max. [bar]	100/110	100/110	100/110
Closing time [s]	0,05	0,05	0,05
Opening time [s]	0,03	0,03	0,03



NEW INSTALLATION SIZES LKE SERIES

Operational safety and areas of application

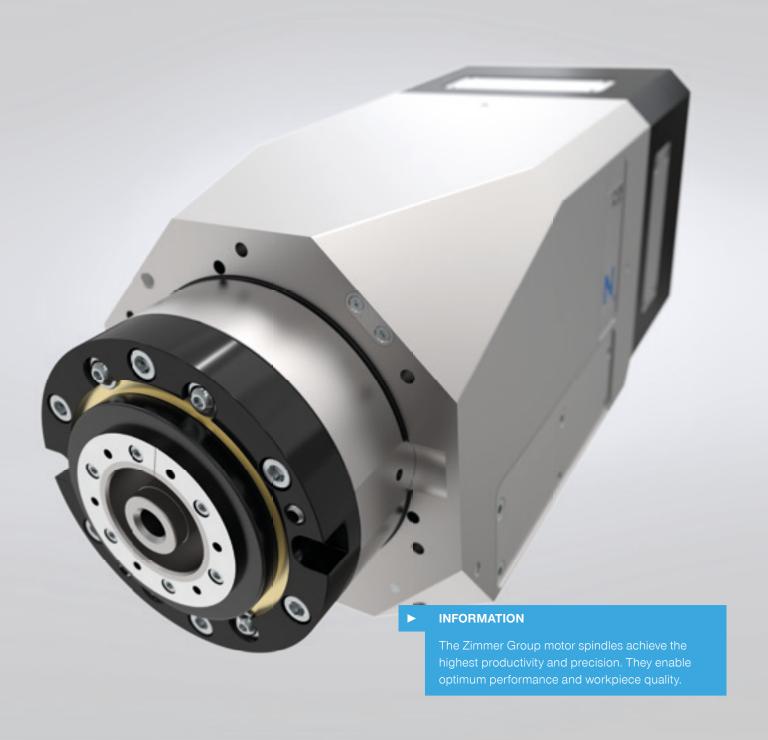
The clamping elements are primarily used for electrically driven linear axes. By holding the axis via the clamping element, high process forces can be absorbed while maintaining the clamping position, which exceed the forces of the linear drive many times over. Other areas of application can be found in simple automation, mechanical engineering and in the automotive industry (e.g. autonomous assembly stations).

Fast and with high holding force

Depending on the size, the LKE series has a very high holding force of up to 1,800 N without jamming permanently. However, the most impressive feature of the new LKE series is its speed and the retention of the holding force without energizing.



	► Technical data
Order No.	LKE30XX
Holding force [N]	1,100
Clamping width [mm]	28,00
Actuation	electric
Function	clamping
Voltage [V]	24
Voltage input max. [A]	1,5
Closing time [s]	0,5
Opening time [s]	0,5



EXTENDED PRODUCT RANGE MOTOR SPINDLES OF THE ZIMMER GROUP

Winner in all (performance) classes

The motor spindle is one of the essential assemblies of a tooling machine, a milling center or a robot-based end-of-arm solution. The mechanically integrated motor solutions are extremely compact, highly productive and achieve maximum rigidity, the prerequisite for maximum speeds and precise concentricity. The Zimmer Group offers you the perfect portfolio for this. Regardless of whether you are looking for a

motor spindle for use in milling machines or machining centers, you will find economical standard motor spindles, air-cooled spindles in the lower and medium performance range, as well as fluid-cooled high-performance spindles and, of course, the matching accessories from inverters to cooling units, C-axes and connection sets in our various spindle kits.

INFORMATIONEN

- ► Air- and water-cooled high-frequency spindles in various power ranges
- Support on topics such as power dimensioning, energy supply, cooling or integration into the control system or service
- Repair and on-site service by expert personnel
- Spindle IO-Link communication module enables condition monitoring or predictive maintenance
- Extremely high reliability, high power density and broad compatibility



Here vou can find our new motor spindle catalog as download





SPN ZERO-POINT CLAMPING SYSTEM **ALL FUNCTIONS ALWAYS AT HAND**

Safely clamped in all areas of application

With the modular system of the Zimmer Group zero point clamping system, you will find the right solution for any requirement. In addition to a standard variant reduced to the basic functions, which fulfills the basic functions such as unlocking and PLUS connection, there is also an Advanced variant with an extensive range of functions to choose from, as is necessary in automated production. Both variants lock positively via clamping segments specially adapted to the

bolt contour, thus creating an extremely rigid system capable of absorbing the highest forces with maximum repeatability. The product range is extended by a wide variety of clamping plates, which are available in any size and different configurations. To increase the protection of the individual zero point clamping system and prevent any ingress of dirt, there is an optional automatic lock that reliably protects the bolt opening.



SPN ZERO-POINT CLAMPING SYSTEM SERIES OVERVIEW

SPN Advanced series - The superior

The zero-point clamping system of Zimmer Group's Advanced series provides a number of functions that are one-of-a-kind in this form and composition. Functions such as the PLUS connection, contact monitoring and pneumatic piston position sensing are integrated as standard, as well as blowing out the pin opening with air and contact surface cleaning.

PRODUCT ADVANTAGES

- ► Locking by means of clamping segments
- ▶ PLUS connection
- Rustproof tempered stainless steel
- ➤ Two integrated rotation locks
- Integrated contact monitoring
- Pneumatic piston position sensing
- Integrated blow-out function
- Two connection options
- Optional automatic seal

SPN Standard series - The economical

The Zimmer Group's standard zero point clamping system is reduced to the essentials with functions such as unlocking and PLUS connection. In addition, two rotation locks devices are also included here. Even this zero point clamping system does not dispense with positive locking by means of clamping segments.

PRODUCT ADVANTAGES

- Concentration on the basic functions
- Locking by means of clamping segments
- PLUS connection
- Rustproof tempered stainless steel
- ➤ Two integrated rotation locks
- Optional automatic seal

SPN ZERO-POINT CLAMPING SYSTEM SHORT SETUP TIMES, MORE PRODUCTIVITY

Maximum repeatability and precision

The zero-point clamping system features a repeatability of 0.005 mm thanks to its sophisticated design. Due to its very high clamping forces and consistent use of tempered stainless steel, the system provides a high-precision, torsionresistant base and also stabilizes parts that tend to vibrate.

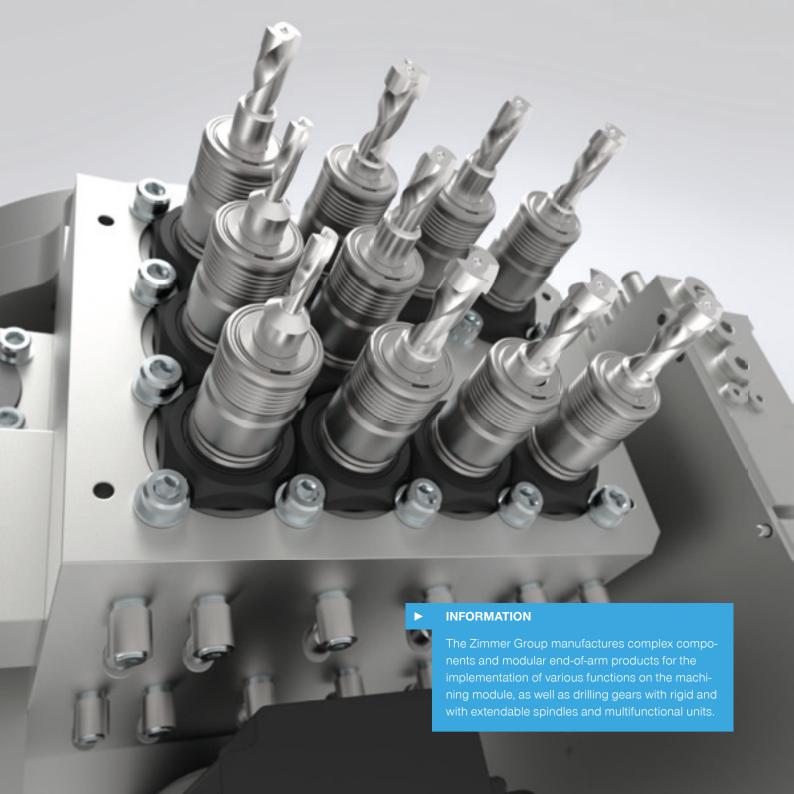
Increased process reliability

The zero-point clamping system reduces errors during milling, rotating, wire or die eroding, flat or cylindrical grinding, drilling, lasering and measuring. The maintenance-free design also contributes to the superior process reliability.

Increased productivity Produktivität

By automating processes the zero point clamping system dramatically increases productivity of processes that required precision. Machine set-up times are reduced up to 90%, and cleaning and maintenance of the system is minimal. The option to link processes, one after the other, in a single workpiece clamping system, in various machining cells and equipped with identical clamping system geometries, allows previously unrealized synergies. The workpiece carrier with the zero point clamping system accompanies the workpiece all the way through the production process, thus ensuring the ultimate in precision and cost efficiency.

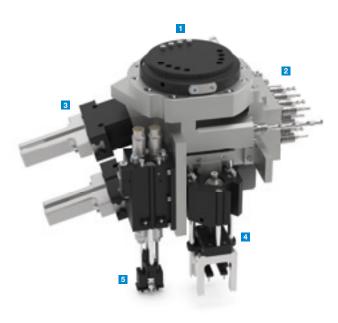




COMPLEX COMPONENTS IN WOODWORKING

Flexibility without limits

The Zimmer Group has been one of the most innovative companies in the woodworking sector for over 25 years. In the 1990s and 2000s, we revolutionized the market, primarily as a think tank and OEM supplier, with groundbreaking solutions such as the world's first e-interface on the machining head. Today we deliver sophisticated high-tech products in the process chain with a focus on the highest flexibility, scalability and productivity. To do so, we use state-of-the-art development technologies and simulation methods -such as the digital twin - as a basis for designing and implementing complete production and assembly cells that feature maximum flexibility.



PRODUCT ADVANTAGES

- Modular multi-function head for implementing the various functions on the machining module
- Project-specific design of the multi-function head for minimum space requirement and tool exchange effort
- Pneumatic two-jaw grippers for workpiece handling
- Drill gears for individual/series drilling
- Setting module for base feet
- Unit for setting and screwing in hinge mount plates

Drive motor

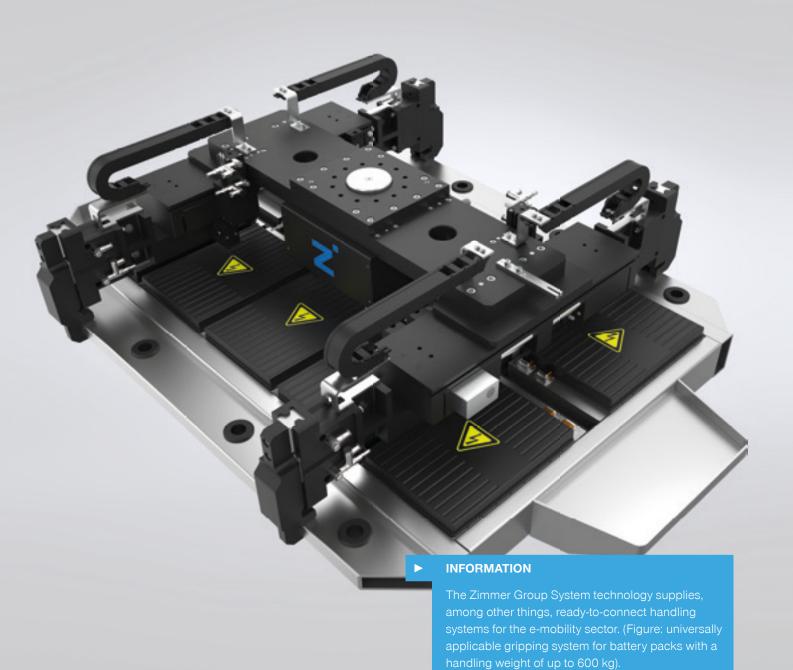
2 10x drill gears

3 Workpiece gripper

4 Setting module for base gripper

5 Setting module for mount plates



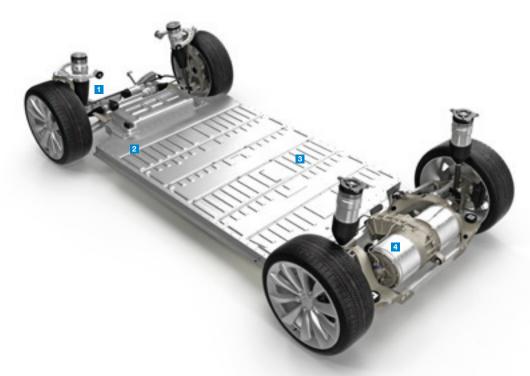


EOAT SOLUTIONS FOR ELECTRIC MOBILITY

Your partner in all areas of e-mobility

The production of electric vehicles places new demands on production technology. Economical production of battery cells and packs is an important factor in ensuring that this market can grow successfully. A high degree of automation, as can already be found in engine production today, is

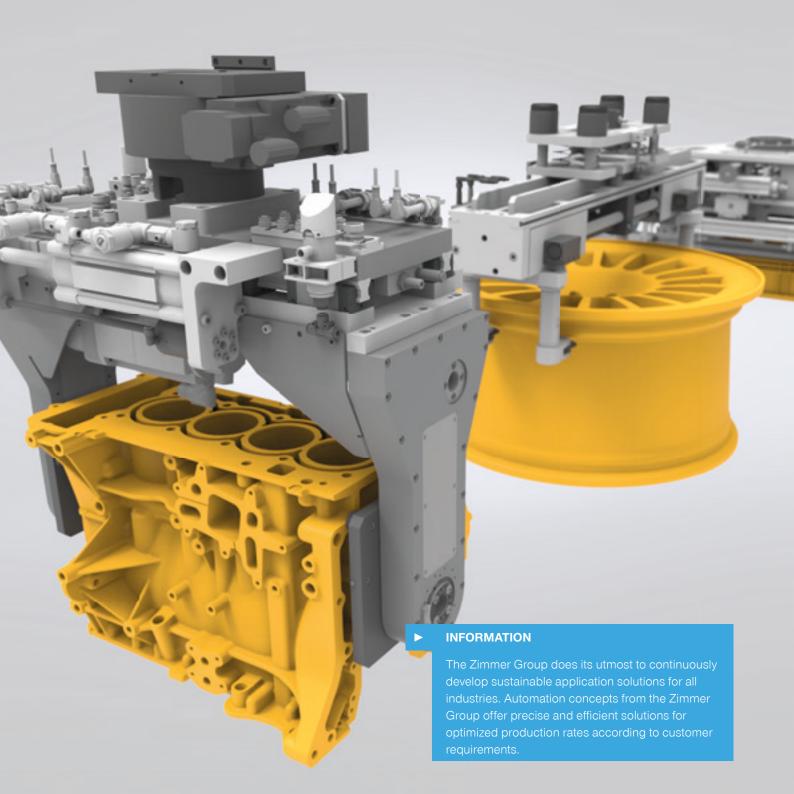
essential for this. The race for the best manufacturing technology has long since begun. The Zimmer Group is a development and system partner to many well-known premium manufacturers in battery production, module assembly and electric motor production.



- 1 Steering gear assembly
- 2 Battery module assembly
- Battery pack assembly
- 4 Rotor and stator assembly

You can find further insights into our system technology area here





SYSTEM TECHNOLOGY **BUNDLES KNOW-HOW**









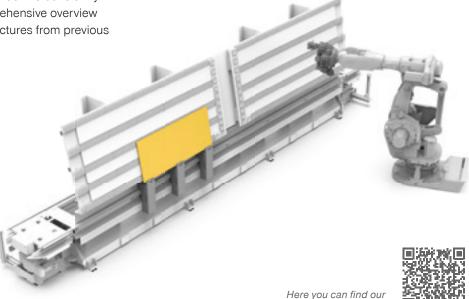
Complete solutions for every industry

The System technology area combines the know-how of all technology areas of the Zimmer Group and offers its customers complete solutions, starting with end-of-arm tooling, through complex modules for process automation, to agile cells for state-of-the-art production facilities. The focus is on the four areas of mobility, automation, consumer goods and

logistics. System technology supports both end customers and system integrators in realizing their production requirements with innovative and reliable automation solutions. Intensive support for the customer – from the concept phase to implementation and beyond - is a matter of course.

System showroom with practical examples

References or ideas? The system showroom is constantly being expanded and provides a comprehensive overview with many application examples and pictures from previous system technology projects.



system showroom



PRODUCT WORLDS AND INNOVATIONS AROUND THE CLOCK

Our virtual trade show booth

A visit to our virtual booth can offer you some advantages. There are no costs for you in contrast to a visit to a trade fair. There is no entrance fee, travel and hotel costs, etc. You can visit our virtual trade fair stand online at any time and 24/7

from the comfort of your office or home office. Meet our employees digitally and ask your questions easily and directly online or via the contact form.

Specific tours

A visit to our virtual showroom is always worthwhile. With the following features, we can also guarantee to inspire you virtually:

- ▶ Rotating exhibition stand. Animated camera flights lead to our six technology areas as well as to our own company area.
- Clickable hotspots and compact information. All exhibits presented can be experienced digitally and each shows a content window with the respective product benefits for our products. Another click then takes you deeper into the details with more images and data sheets. Do you need even more information? Then our video presentation will help you.
- Exhibits are impressively prepared digitally. Our products are available as rotatable 3D models and can thus be viewed from any side.
- ► Content available in many languages. All information on our virtual booth is available in the Zimmer Group communication languages German, English, French, Italian, Polish, Slovakian, Spanish, Chinese and Korean.

